



The Space Shuttle program plays a vital role in NASA's enabling goal to extend the duration and boundaries of human use and development of space by providing safe, routine access to space in support of both permanent commercial and human operations in low-earth orbit.

# **SPACE SHUTTLE**

## **MAJOR EVENTS IN FY 2004**

---

- Five flights focused on Space Station assembly.
- Space Shuttle Main Engine Health Management System ready for first flight.

## THEME: Space Shuttle Program (SSP)

### OVERVIEW

The Space Shuttle program plays a vital role in enabling NASA's vision and mission. This includes advancing human exploration and providing safe, routine access to space in support of human operations in low-earth orbit. In order to maintain a viable human transportation capability that will operate into this new century and support NASA's launch requirements, specific program investments are required. NASA is revamping its approach to selecting and managing these investments to ensure Shuttle operability into the next decade and avoid future project overruns. These investments will be consistent with NASA's strategy of ensuring the Space Shuttle remains viable until a new transportation system is operational. These projects will provide revitalization of the infrastructure, and combat obsolescence of vehicle, ground systems, and facilities. The FY04 budget request will allow NASA to meet the intended flight rates; provide appropriate contingency planning to assure transportation and assembly support to the International Space Station (ISS); & include high priority projects for service life extension.

Missions	Goals supported by this theme	Objectives supporting those goals	Reference 2003 Strategic Plan
Understand & Protect Earth	1. Understand the Earth system and apply Earth system science to improve prediction of climate, weather, and natural hazards.	1.1 Understand how the Earth is changing, better predict change, and understand the consequences for life on Earth. (Supporting Role)	
Explore	4. Explore the fundamental principles of physics, chemistry, and biology through research in the unique natural laboratory of space.	4.1 Understand how life responds to the space environment and the role of gravity in the processes of life. (Supporting Role)	
	5. Explore the solar system and the universe beyond, understand the origin and evolution of life, and search for evidence of life elsewhere.	5.1 Learn how the solar system originated and evolved to its current diverse state. (Supporting Role)	
Inspire	6. Inspire and motivate students to pursue careers in science, technology, engineering, and mathematics.	6.1, 6.2, 6.3, 6.4 (Supporting Role) - See Education Programs Theme.	
	7. Engage the public in shaping and sharing the experience of exploration and discovery.	7.2 Improve science literacy by engaging the public in NASA missions and discoveries, and their benefits, through such avenues as public programs, community outreach, mass media, and the internet.	
Enabling Capabilities	8. Ensure the provision of space access, and improve it by increasing safety, reliability, and affordability.	8.3 Improve the accessibility of space to better meet research, Space Station assembly, and operations requirements.	
	9. Extend the duration and boundaries of human space flight to create new opportunities for exploration and discovery.	9.4 Demonstrate the ability to support a permanent human presence in low Earth orbit as a stepping stone to human presence beyond. (Supporting Role)	

### RELEVANCE

In 1972 President Nixon issued a statement to initiate the "development of an entirely new type of space transportation system designed to help transform the space frontier of the 1970s into familiar territory, easily accessible for human endeavor in the 1980s and '90s". Since 1991, operational savings have allowed shuttle costs to decrease, while Shuttle safety, capability and success have dramatically increased. The mission of the SSP remains consistent in that its key program goals are to Fly Safely, Meet the Manifest, Improve Mission Supportability, and Improve the System.

The Space Shuttle can be configured to carry many different types of equipment, spacecraft and scientific experiments.

The Space Shuttle is essential in the assembly of the ISS (advancing life sciences & technology through long-duration missions) and repairing & servicing the Hubble Space Telescope (enabling many new discoveries in Space Science). As an enabling function, the SSP is fully engaged in providing services for earth & physical science research.

SSP also engages the private sector in the development of space by providing flight opportunities for industry, academia & government to conduct applied research relevant to NASA's mission through access to the space environment.

Cooperative activities with the National Institutes of Health (NIH), the National Science Foundation (NSF), the Department of Defense (DoD) and other U.S. agencies are advancing knowledge of health, medicine, science and technology.

#### Education and Public Benefits

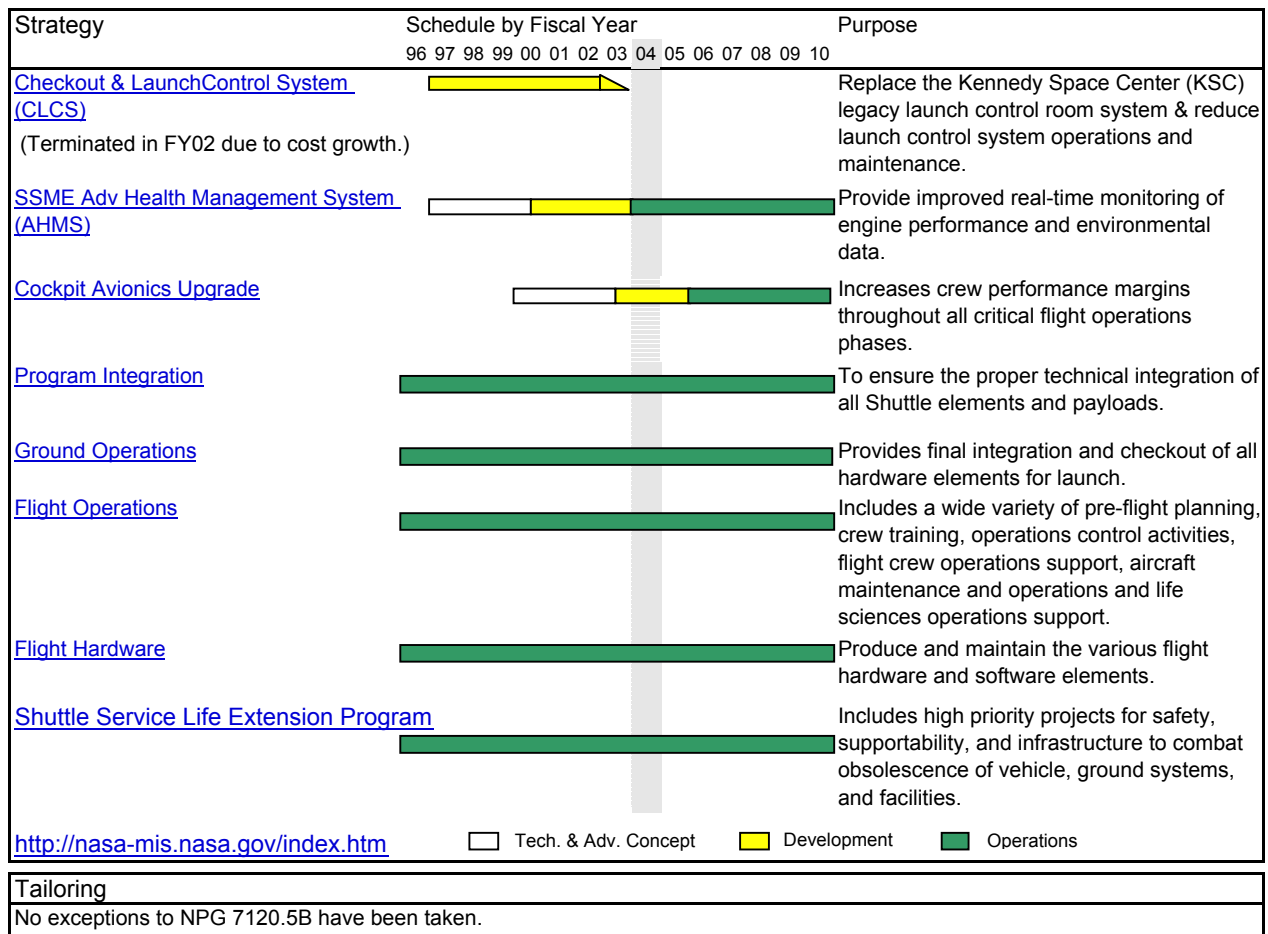
- Long term benefits to the public through support to the ISS program & other primary payload customers.
- Enables researchers to undertake experiments in the unique environment of space.
- SSP is contributing to NASA's goal to get students excited about science & mathematics & help advance our nation's education goals by supporting the Educator Astronaut program .

## THEME: Space Shuttle Program (SSP)

### IMPLEMENTATION

This theme is composed of many integrated parts which work together to achieve the aforementioned goals and objectives. Those elements are summarized below. Selected Development efforts have individual follow-on information sheets, as do Operations.

SSP is a multiple-project program and single-program theme with program responsibility in the Office of Space Flight at NASA HQ. The Agency Program Management Council (PMC) has SSP governing responsibility. Enterprise official is William F. Readdy, Associate Administrator for Space Flight at HQ. Theme Director is General Michael C. Kostelnik, Deputy Associate Administrator for ISS and SSP at HQ.



### STATUS

The Space Shuttle Program accomplished 4 flawless missions in FY2002. STS-108 (12-17-01) carried the Expedition 4 crew & logistics to the ISS. This mission also honored the victims of 9/11 terrorist attacks by the "Flags for Heroes and Families" campaign, carrying thousands of U.S. flags into space (which were distributed to the victims' families and to the survivors of the attacks). STS-109 (3-12-02), the 4th mission to service the Hubble Space Telescope, extended the lifetime and capabilities of the now-famous orbiting telescope. This also marked the 1st flight of the Block II Engine Cluster. STS-110 (4-19-02) was the 13th U.S. mission to the ISS, achieving distinction by carrying the 1st major external truss section for the station, referred to as the S0 integrated truss segment. STS-111 (6-5-02) carried a 5th resident crew to the station as well as the Leonardo logistics module filled with experiments.

Go to <http://spaceflight.nasa.gov> for more detailed status information.

## THEME: Space Shuttle Program (SSP)

### PERFORMANCE MEASURES

Annual Performance Goals	
<u>OUTCOME 1.1.2:</u>	Expand Earth Science research opportunities through utilization of the unique capabilities of the Space Shuttle
4SSP1	Achieve 100% on-orbit mission success when carrying Earth science payloads. For this metric, mission success criteria are those provided to the prime contractor (SFOC) for purposes of determining successful accomplishment of the performance incentive fees in the contract.
<u>OUTCOME 4.1.2:</u>	Ensure the opportunity for successful scientific research projects and programs by providing safe, reliable, and affordable launch and recovery capability, sustaining payload resources, and a human presence.
4SSP2	Achieve 100% on-orbit mission success when carrying physical science payloads. For this metric, mission success criteria are those provided to the prime contractor (SFOC) for purposes of determining successful accomplishment of the performance incentive fees in the contract.
<u>OUTCOME 5.1.1:</u>	Support future exploration by providing Space Shuttle launch capability for research, technology development, and exploration missions.
4SSP3	Achieve 100% on-orbit mission success when servicing HST. For this metric, mission success criteria are those provided to the prime contractor (SFOC) for purposes of determining successful accomplishment of the performance incentive fees in the contract.
<u>OUTCOME 6.1.1:</u>	Kindergarten through graduate students will be more proficient in science, technology, engineering, and mathematics (STEM).
4SSP4	Ensure the development and distribution of OSF content for curricular use in NASA Explorer Schools and in the Educator Mission Specialist Program.
<u>OUTCOME 6.2.1:</u>	More students from diverse communities motivated to pursue careers in STEM.
4SSP5	Increase by 10%, students participating in OSF research and development opportunities that enhances their academic experience, strengthens their professional skills, and supports their successful transition into the scientific and technical workforce.
<u>OUTCOME 6.3.1:</u>	Improve quality of STEM instruction.
4SSP6	Reach and expose, through both formal and informal education venues, 800 in-service and pre-service teachers, university teacher education faculty and students to mathematics and science careers and to OSF's unique educational resources.
4SSP7	During academic year 2003-2004, increase by 2 the number of pre-college programs for students participation in OSF center sponsored education enrichment activities that promotes their interest in and knowledge of mathematics, science, engineering and technology career fields.
<u>OUTCOME 6.4.1:</u>	More students prepared to enter the STEM workforce.
4SSP8	During academic year 2003-2004, increase by 4% the number of undergraduate and graduate students & faculty researchers exposed and gaining hands-on experience in OSF's state-of-the-art research instrumentation and methodologies.
4SSP9	Host 2 forums to strengthen OSF partnership with the minority university community and to more fully engage faculty & students from this community in OSF's mission.
<u>OUTCOME 7.2.3:</u>	Use OSF unique facilities, education resources, formal and informal venues(conferences, workshops, science centers, museums) and print, web and TV media, to to reach and engage an increasing number or percent of the public in exploration and space development activities.
4SSP10	Increase by 10%, OSF venues (educational, commercial, and political) that provide "hands-on" opportunities for the public to experience and become more knowledgeable of OSF benefits and contributions, particularly ISS.
4SSP11	Increase the number of visits to the Space Flight websites.
<u>OUTCOME 8.3.1:</u>	Assure public, flight crew, and workforce safety for all Space Shuttle operations and safely meet the FY04 manifest and flight rate commitment.
4SSP12	Achieve zero type A (damage to property at least \$1M or death) or B (damage to property at least \$250K or permanent disability or hospitalization of 3 or more persons) mishaps in FY 2004.
4SSP13	Achieve an average of 8 or fewer flight anomalies per Space Shuttle mission.
4SSP14	Provide safe, reliable space transportation and/or a space-based platform that allows our customers to achieve 100% on-orbit mission success for all flights in FY 2004. For this metric, mission success criteria are those provided to the prime contractor (SFOC) for purposes of determining successful accomplishment of the performance incentive fees in the contract.
4SSP15	Perform annual critical review of requirements, priorities, risks, and progress to effectively support Shuttle service life extension.

## THEME: Space Shuttle Program (SSP)

### PERFORMANCE MEASURES (continued)

<b>Annual Performance Goals</b>	
<b>OUTCOME 9.4.2:</b>	Further the capability of humans to live and work safely in space by transporting crews to ISS for longer on-orbit durations.
4SSP16	Achieve 100% on-orbit mission success for all Shuttle flights to ISS in FY 2004. For this metric, mission success criteria are those provided to the prime contractor (SFOC) for purposes of determining successful accomplishment of the performance incentive fees in the contract.
<b>UNIFORM MEASURE:</b>	
4SSP17	Conduct a well managed program in accordance with Agency implementing strategies. The Space Shuttle Program Theme commits to execute its programs within +10% of the total cost shown on the following table.
4SSP18	The Space Shuttle Program Theme commits to execute programs within +10% of its baseline schedules.

### INDEPENDENT REVIEWS

Types of Review	Performer	Last Review	Next Review	Purpose
Business Review	RAND	30-Sep-02	N/A	Evaluate options for Shuttle program competitive sourcing.

### BUDGET

Budget Authority (\$millions)	FY02	FY03	Change	FY04	Comments
<b>Space Shuttle Program</b>	<b>3,270.0</b>	<b>3,208.0</b>	<b>+760.4</b>	<b>3,968.4</b>	
<b>DEVELOPMENT</b>	<b>177.4</b>	<b>148.6</b>	<b>-51.8</b>	<b>96.8</b>	
Checkout & LaunchControl System (CLCS)	61.0	52.1	-52.1	0.0	Cancelled 9/02
Other Service Life Extension Projects	116.4	96.5	+0.3	96.8	
SSME AHMS	15.5	8.0	-1.7	6.3	
Cockpit Avionics Upgrade	100.9	88.5	+2.0	90.5	Procurement funding only
<b>OPERATIONS</b>	<b>3,092.6</b>	<b>3,059.4</b>	<b>+812.2</b>	<b>3,871.6</b>	*no scheduled completion, ongoing activity.
Program Integration	395.7	402.7	-70.6	332.1	
Ground Operations	537.1	527.9	+371.6	899.5	
Flight Operations	238.0	264.6	+110.8	375.4	
Flight Hardware	1,787.5	1,681.7	+301.5	1,983.2	
Shuttle Service Life Extension Program	134.3	182.5	+98.9	281.4	*contains full costs delta for CAU

Indicated budget numbers in Full Cost.

Indicates changes since the FY 2003 Presidents Budget Submit.

Note: For all formats, the FY 02 column reflects the FY 2002 Congressional Operating Plan dated 9/30/02. The FY 03 column reflects the FY 2003 Presidents Budget Submit (PBS) as Amended. The Change column includes both programmatic and full cost adjustments. FY 2004 column is in full cost.

**THEME:** Space Shuttle Program (SSP)

THIS PAGE LEFT INTENTIONALLY BLANK

<b>THEME:</b>	Space Shuttle Program (SSP)
<b>DEVELOPMENT:</b>	Checkout and Launch Control System (CLCS)

## PURPOSE

Objectives	Reference 2003 Strategic Plan	Performance Measures
This project has been cancelled and therefore no FY04 measure is provided.		

The overall objectives of the CLCS Project were to modernize the Space Shuttle launch processing system and to reduce inherent risks associated with Shuttle Processing at KSC.

This project was cancelled on September 16, 2002 due to cost growth.

## OVERVIEW

This project was cancelled on September 16, 2002 due to cost growth.

CLCS was to modify the firing rooms at KSC and Shuttle Avionics Integration Laboratory at JSC. The system was to use modern commercial products and standards (computers, system software, networks, user interfaces, software development tools, etc.) to replace legacy hardware and software systems.

## PROGRAM MANAGEMENT

CLCS was a single-project program with program responsibility delegated to the Johnson Space Center. Prime Contractor was United Space Alliance. The OSF Program and Institutional Management Council (OPIMC) had SSP governing responsibility. The Agency Program Management Council (PMC) had CLCS governing responsibility. Enterprise official was William F. Readdy, Associate Administrator for Office of Space Flight at HQ. The Point of Contact was General Michael C. Kostelnik, Deputy Associate Administrator for ISS and SSP at HQ. This project was cancelled on September 16, 2002 due to cost growth.

## TECHNICAL COMMITMENT

The baseline for this technical commitment was made in June, 1997

Technical Specifications	Current Baseline	FY04 President's Budget	Change from Baseline
Throughput (peak)	--	--	--
R/T Closed Loop Contr	--	--	--
Redundancy Mgmt			
Availability	--	--	--
*This project has been cancelled.			

Schedule	Current Baseline	FY04 President's Budget	Change from Baseline
SLWT Ready	--	--	--
HMF FRCS	--	--	--
OPF ORR	--	--	--
Launch Capable	--	--	--
Project Compl	--	--	--
*This project has been cancelled.			

**THEME:** Space Shuttle Program (SSP)

**DEVELOPMENT:** Checkout and Launch Control System (CLCS)

### ACQUISITION STRATEGY & PERFORMING ORGANIZATIONS

This project was cancelled on September 16, 2002 due to cost growth.

Current Acquisitions	Actual *	Selection Method	Actual *	Performer	Actual *
Cooperative Agreements	%	Full & Open Competition	%	Industry	100%
Cost Reimbursable	100%	Sole Source	100%	Government	%
Fixed Price	%		100%	NASA Intramural	%
Grants	%			University	%
Other	%	Sci Peer Review	%	Non Profit	%
* as % of FY02 direct procurement		* as % of FY02 direct procurement		* as % of FY02 direct procurement	
100%				100%	

Future Acquisitions - Major	Selection	Goals
This project was cancelled on September 16, 2002 due to cost growth.		

### AGREEMENTS

None

### INDEPENDENT REVIEWS

Types of Review	Performer	Last Review	Next Review	Purpose
NASA Non-Advocacy Review	Agency/IPAC	Jun-97		Review project viability, cost/benefit.
SSP Indep. Assessment Team	SSP	Aug-00		Review management approach, organizational structure.
NASA Special Assessment Rev.	HQ	Aug-02		Review cost/benefit.

### BUDGET / LIFE CYCLE COST

Total budget authority represents the Life Cycle Cost (LCC). These figures include budget years FY1997 through FY2003.

Budget Authority (\$ in millions)	Prior	FY02	FY03	FY04	FY05	FY06	FY07	FY08	BTC	Total	Comments
<b>FY 2004 President's Budget (LCC)</b>	<b>212.9</b>	<b>61.0</b>	<b>52.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>		<b>326.0</b>	
Development	212.9	61.0	52.1							326.0	
Operations										0.0	
Data Analysis											
<b>Changes since FY 03 Pres. Budget</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-37.5</b>	<b>-26.6</b>	<b>-8.5</b>	<b>-</b>	<b>-</b>		<b>-72.6</b>	<b>Reason for Change:</b>
Development	-	-	-	-37.5	-26.6	-8.5	-	-		-72.6	Project cancelled September 2002.
Operations											
Data Analysis											
<b>FY 2003 President's Budget (LCC)</b>	<b>212.9</b>	<b>61.0</b>	<b>52.1</b>	<b>37.5</b>	<b>26.6</b>	<b>8.5</b>	<b>0.0</b>	<b>0.0</b>		<b>398.6</b>	Based on the recommendations of
Development	212.9	61.0	52.1	37.5	26.6	8.5	0.0	0.0		398.6	an independent assessment team,
Operations										0.0	the project was rebaselined and
Data Analysis										0.0	restructured in November 2000.
<b>Basis of Estimate (BOE)</b>	<b>194.4</b>	<b>11.3</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>		<b>205.7</b>	Baseline Budget Date: June 3, 1997
Development	194.4	11.3	0.0	0.0	0.0	0.0	0.0	0.0		205.7	
Operations											
Data Analysis											
Indicates changes since the FY 2003 Presidents Budget Submit.											
FY 2002, FY 2003, Prior and BTC are not in full cost.											



<b>THEME:</b>	Space Shuttle Program (SSP)
<b>DEVELOPMENT:</b>	SSME Advanced Health Management System (AHMS) Phase I

## PURPOSE

Objectives	Reference 2003 Strategic Plan	Performance Measures
8.3 Improve the accessibility of space to better meet research, ISS assembly, and operations requirements by increasing Shuttle safety, reliability, and maintainability.		4SSP15

AHMS project supports this objective by enabling safe Space Shuttle Main Engine shutdown during potentially catastrophic high pressure turbopump failures. Decreases ascent risk by approximately 10%.

## OVERVIEW

AHMS project for the Space Shuttle Main Engines (SSME) will provide improved real-time vibration monitoring of the SSME and will provide improved engine anomaly response capabilities. AHMS consists of modifications to the existing SSME flight controller. These modifications include: 1) adding a vibration redline monitor for high pressure turbopumps, 2) doubling memory capacity and utilizing radiation tolerant memory, 3) adding an external communication interface for a potential Phase 2 Health Management Computer, and 4) eliminating existing memory retention batteries and replacing them with non-volatile memory. This project funds these modifications and the testing necessary to validate their performance and safety benefits to the Space Shuttle program.

## PROGRAM MANAGEMENT

AHMS is a single-project program with program responsibility delegated to the Johnson Space Center. Marshall Space Flight Center, Stennis Space Center and Kennedy Space Center also have critical roles in the realization of this program. Prime Contractor is Boeing-Rocketdyne. The OSF Program and Institutional Management Council (OPIMC) has SSP governing responsibility. The Agency Program Management Council (PMC) has AHMS governing responsibility. Enterprise official is William F. Readdy, Associate Administrator for Office of Space Flight at HQ. The Point of Contact is General Michael C. Kostelnik, Deputy Associate Administrator for ISS and SSP at HQ. The Program Manager is Jeffrey Spencer at MSFC. Full compliance with NPG 7120.5B will be achieved in FY 03.

## TECHNICAL COMMITMENT

The baseline for this technical commitment was made in June, 1997.

Technical Specifications	Current Baseline	FY04 President's Budget	Change from Baseline
Digital Computer Unit Memory	64K	128K	+64
Controller Weight	+3lbs	+1lb	-2lbs
Time to initiate engine shutdown after vibration redline exceedance	125	125	--

Schedule	Current Baseline	FY04 President's Budget	Change from Baseline
<b>Phase I</b>			
Critical Design Review	May-01	May-01	Complete
Design Certification Review	Nov-03	Feb-04	+ 3 months
Ready for First Flt.	Jun-04	Jun-04	+ 1 month

<b>THEME:</b>	Space Shuttle Program (SSP)
<b>DEVELOPMENT:</b>	SSME Advanced Health Management System (AHMS) Phase I

### ACQUISITION STRATEGY & PERFORMING ORGANIZATIONS

Boeing-Rocketdyne has a cost plus award fee/incentive fee contract to develop this project.

Changes since FY03 Pres. Budget: None.

Current Acquisitions	Actual *	Selection Method	Actual *	Performer	Actual *
Cooperative Agreements	0%	Full & Open Competition	0%	Industry	100%
Cost Reimbursable	100%	Sole Source	100%	Government	0%
Fixed Price	0%		100%	NASA Intramural	0%
Grants	0%			University	0%
Other	0%	Sci Peer Review	0%	Non Profit	0%
* as % of FY02 direct procurement	100%	* as % of FY02 direct procurement		* as % of FY02 direct procurement	100%

Future Acquisitions - Major	Selection	Goals
None		

### AGREEMENTS

Internal: The program is not dependent on other NASA activities outside of the control of the Associate Administrator of Space Flight.

External: None

Changes since FY03 Pres. Budget: None.

### INDEPENDENT REVIEWS

Types of Review	Performer	Last Review	Next Review	Purpose
Independent Assessment	IPAO	1-Jan-01	None	Assess probability of meeting technical objectives on schedule and within cost. Assess mission risks and measures available to mitigate those risks.

### BUDGET / LIFE CYCLE COST

These figures include budget years FY2000 through FY2007.

Budget Authority (\$ in millions)	Prior	FY02	FY03	FY04	FY05	FY06	FY07	FY08	BTC	Total	Comments
<b>FY 2004 President's Budget</b>	<u>21.1</u>	<u>15.5</u>	<u>8.0</u>	<u>6.3</u>	<u>3.0</u>	<u>2.0</u>	<u>1.3</u>	<u>0.0</u>		<u>57.2</u>	
Development	21.1	15.5	8.0	6.3	3.0	2.0	1.3			57.2	
Direct Civil Service (FTE)	2	2	2	2	2	2	2				
<b>Changes since FY 03 Pres. Budget</b>	<u>-0.9</u>	-	-	<u>+3.3</u>	-	-	<u>+0.3</u>	-		<u>+2.7</u>	<b>Reason for Change:</b>
Development	-0.9	-	-	+3.3	-	-	+0.3	-		+2.7	Rephasing; no programmatic
Direct Civil Service (FTE)	-	-	-	-	-	-	-	-		-	
G&A Rates											
<b>FY 2003 President's Budget</b>	<u>22.0</u>	<u>15.5</u>	<u>8.0</u>	<u>3.0</u>	<u>3.0</u>	<u>2.0</u>	<u>1.0</u>	<u>0.0</u>		<u>54.5</u>	
Development	22.0	15.5	8.0	3.0	3.0	2.0	1.0			54.5	
Direct Civil Service (FTE)	2	2	2	2	2	2	2				
G&A Rates											
<b>Basis of Estimate (BOE)</b>	<u>22.0</u>	<u>15.5</u>	<u>8.0</u>	<u>3.0</u>	<u>3.0</u>	<u>2.0</u>	<u>1.0</u>	<u>0.0</u>		<u>54.5</u>	Baseline established July
Development	22.0	15.5	8.0	3.0	3.0	2.0	1.0			54.5	2000 at Program Authorization
Direct Civil Service (FTE)	2	2	2	2	2	2	2				to Proceed (ATP).
G&A Rates											

Indicated budget numbers in Full Cost.

Indicates changes since the FY 2003 Presidents Budget Submit.

FY 2002, FY 2003, Prior and BTC are not in full cost.

<b>THEME:</b>	Space Shuttle Program (SSP)
<b>DEVELOPMENT:</b>	Cockpit Avionics Upgrade

## PURPOSE

Objectives	Reference 2003 Strategic Plan	Performance Measures
8.3 Improve the accessibility of space to better meet research, ISS assembly, and operations requirements.		4SSP15

The CAU will increase crew situational awareness and decrease crew workload in the cockpit to enable more timely and accurate crew decisions. Excessive crew workload adversely affects the crew's situational awareness and impairs crew ability to diagnose and isolate system failures. Improving the crew's ability to manage information during critical flight operations will significantly benefit the safety and reliability of the SSP. The CAU minimum success criteria for safety improvement is a 100% increase in trajectory monitoring, a 50% increase in critical system monitoring, and 20% increase in overall system monitoring.

## OVERVIEW

CAU will implement new Orbiter cockpit avionics hardware and software to meet the man-machine interface requirements identified by the Space Shuttle Cockpit Council to enhance overall crew safety. Orbiter cockpit displays and crew interface capabilities will be significantly improved by replacing the existing Integrated Display Processors (IDPs) with higher performance Command and Display Processors (CDPs). These units will provide expanded processing performance to enable dramatic improvements in information access and display capability as well as the implementation of the new Abort Flight Management software function.

## PROGRAM MANAGEMENT

CAU is a single-project program with program responsibility delegated to the Johnson Space Center. The Prime contractor is United Space Alliance. The Office of Space Flight Program and Institutional Management Council (PIMC) has SSP governing responsibility. The Agency Program Management Council (APMC) has CAU governing responsibility. Enterprise official is William F. Readdy, Associate Administrator for the Office of Space Flight at HQ. The Point of Contact is General Michael C. Kostelnik, Deputy Associate Administrator for ISS and SSP at HQ. The Program Manager is Michael Brieden at JSC. Full compliance with NPG 7120.5B will be achieved in FY 03.

## TECHNICAL COMMITMENT

The baseline for this technical commitment was made in September, 2000

Technical Specifications	Current Baseline	FY04 President's Budget	Change from Baseline
Crew situational awareness			
- On-board trajectory monitoring	*100% increase	*100% increase	--
- On board critical systems monitoring	*50% increase	*50% increase	--
- On-board overall systems monitoring	*20% increase	*20% increase	--
* Increase is relative to current on-board Shuttle cockpit avionics capability as measured using industry standard Situation Awareness Global Assessment Technique (SAGAT)			
Schedule	Current Baseline	FY04 President's Budget	Change from Baseline
<b>Phase I</b>			
Preliminary Design Review	Apr-02	Apr-02	Complete
Critical Design Review	Jul-03	Jul-03	--
Ready for First Flt.	CY 2006	CY 2006	--

**THEME:** Space Shuttle Program (SSP)

**DEVELOPMENT:** Cockpit Avionics Upgrade

#### ACQUISITION STRATEGY & PERFORMING ORGANIZATIONS

United Space Alliance has a cost plus award fee/incentive fee contract to develop this project.  
Changes since FY03 Presidents Budget: None.

Current Acquisitions	Actual *	Selection Method	Actual *	Performer	Actual *
Cooperative Agreements	%	Full & Open Competition	%	Industry	100%
Cost Reimbursable	100%	Sole Source	100%	Government	%
Fixed Price	%		100%	NASA Intramural	%
Grants	%			University	%
Other	%	Sci Peer Review	%	Non Profit	%
* as % of FY02 direct procurement	100%	* as % of FY02 direct procurement		* as % of FY02 direct procurement	100%

Future Acquisitions - Major	Selection	Goals
None		

#### AGREEMENTS

Internal: MOU between JSC and NASA Ames Research Center regarding common interests in Shuttle improvements and new aerospace technologies (human factors and information technology expertise).

External: None

**Changes since FY03 Pres. Budget: None.**

#### INDEPENDENT REVIEWS

Types of Review	Performer	Last Review	Next Review	Purpose
Independent Cost Estimate NAR	Aerospace IPAO	Sep-2002 Oct-2002	TBD N/A	To perform an Independent Cost Estimate (ICE). To assess the probability of meeting project technical objectives onschedule and within cost. To assess the mission risks and measures available to mitigate those risks.

#### BUDGET/LIFE CYCLE COST

These figures include budget years FY2000 through FY2006. Transition & orbiter mod kit costs are excluded here but will be accommodated within the Flight Hardware budget. This project is not yet in full cost, however, full cost is included in the Service Life Extension Program (SLEP) figures. Individual projects will specify their full cost allocations during the POP-03 process.

Budget Authority (\$ in millions)	Prior	FY02	FY03	FY04	FY05	FY06	FY07	FY08	BTC	Total	Comments
<b>FY 2004 President's Budget</b>	<u>71.0</u>	<u>100.9</u>	<u>88.5</u>	<u>90.5</u>	<u>76.9</u>	<u>14.2</u>	<u>0.0</u>	<u>0.0</u>		<u>442.0</u>	
Development	71.0	100.9	88.5	90.5	76.9	14.2	0.0			442.0	
Direct Civil Service (FTE)		20	20	20	17	11					
											*FY03 is the Initial Baseline year for this development.
<b>Initial Baseline (LCC)</b>	<u>71.0</u>	<u>100.9</u>	<u>88.5</u>	<u>90.5</u>	<u>76.9</u>	<u>14.2</u>	<u>0.0</u>	<u>0.0</u>		<u>442.0</u>	
Development	71.0	100.9	88.5	90.5	76.9	14.2	0.0			442.0	

<b>THEME:</b>	Space Shuttle Program (SSP)
<b>OPERATIONS:</b>	Program Integration

## PURPOSE

Objectives	Reference 2003 Strategic Plan	Performance Measures
8.3 Improve the accessibility of space to better meet research, ISS assembly, and operations requirements.		4SSP14

SSP Program Integration assures the successful technical integration of all Shuttle elements and payloads into each mission to efficiently and effectively meet our customer requirements in exploring the fundamental principles of physics, chemistry, and biology through research in the unique environment of space. Program Integration performs the analyses necessary to demonstrate our ability to safely and reliably conduct each Shuttle mission.

## OVERVIEW

The Program Integration budget includes funds for the analysis, management, and the Safety, Reliability, Maintainability & Quality Assurance function that is performed for the entire Space Shuttle Program. Program integration includes those elements managed by the Space Shuttle Program Office at the Johnson Space Center (JSC) and conducted primarily by United Space Alliance, including payload integration into the Space Shuttle and systems integration of the flight hardware elements through all phases of flight. Shuttle integration provides for the engineering analysis needed to ensure that payloads that are integrated to form a viable and safe cargo and meet Space Shuttle interface requirements. Shuttle integration includes the necessary mechanical, aerodynamic and avionics engineering tasks to ensure that the launch vehicle can be safely launched, fly a safe ascent trajectory, achieve planned performance and descend to a safe landing.

## PROGRAM MANAGEMENT

The Shuttle program integration responsibility is delegated to JSC. The OSF Program and Institutional Management Council (OPIMC) has SSP governing responsibility. Enterprise official is William F. Readdy, Associate Administrator for Space Flight at HQ. Theme Director and Point of Contact is General Michael C. Kostelnik, Deputy Associate Administrator for ISS and SSP at HQ. The Program Manager is Ronald D. Dittmore at JSC. Full compliance with NPG 7120.5B will be achieved in FY 03.

## TECHNICAL COMMITMENT

Flights are baselined approximately 12 to 13 months prior to targeted launch date.

Technical Specifications	FY04 President's Budget	Change from Baseline
STS-117	Integrate & Deliver S3/S4 Truss	--
STS-118	Integrate & Deliver S5 Truss	--
STS-119	Integrate & Deliver S6 Truss, Rotate Crew	--
STS-120	Integrate & Deliver Node 2	--
STS-121	ULF2 -Integrate, Deliver, & Return MPLM, Rotate Crew	--

Schedule	FY04 President's Budget	Change from Baseline
STS-117/Endeavour	1st Qtr FY 04	--
STS-118/Columbia	1st Qtr FY 04	--
STS-119/Atlantis	2nd Qtr FY 04	--
STS-120/Endeavour	2nd Qtr FY 04	--
STS-121/Discovery	4th Qtr FY 04	--

**THEME:** Space Shuttle Program (SSP)

**OPERATIONS:** Program Integration

### ACQUISITION STRATEGY & PERFORMING ORGANIZATIONS

The prime contractor for program integration is United Space Alliance under the Space Flight Operations Contract (SFOC). This contract covers operations through September 30, 2004. The SFOC contract was awarded in 1996 as a sole source contract on the determination that this acquisition strategy was in the best interest of the U. S. Government in reducing procurement costs, overall contract costs, and minimizing the disruption of on-going Shuttle operations. Changes since FY03 Pres. Budget: None.

Current Acquisitions	Actual *	Selection Method	Actual *	Performer	Actual *
Cooperative Agreements	0%	Full & Open Competition	12.4%	Industry	98.6%
Cost Reimbursable	95.8%	Sole Source	87.6%	Government	1.2%
Fixed Price	2.6%		100%	NASA Intramural	0%
Grants	0%			University	0.1%
Other	1.5%	Sci Peer Review	N/A	Non Profit	0.1%
* as % of FY02 direct procurement		* as % of FY02 direct procurement		* as % of FY02 direct procurement	
100%				100%	

Future Acquisitions - Major	Selection	Goals
SFOC	Full & Open	President's Mgt. Agenda on Competitive Sourcing

### AGREEMENTS

Internal: Not dependent on other NASA activities outside of the control of the Associate Administrator of Space Flight.

External: None

### INDEPENDENT REVIEWS

Types of Review	Performer	Last Review	Next Review	Purpose
None				

### BUDGET

Budget Authority (\$ in millions)	FY02	FY03	FY04	Comments
FY 2004 President's Budget	395.7	402.7	332.1	
Program Integration	395.7	402.7	332.1	
Changes since FY 03 Pres. Budget	-	-	-205.6	
				<b>Reason for Change:</b> Moved infrastructure to SLEP, Reallocated Privatization funds to other Ops, and Full Cost restructure.
Indicated budget numbers in Full Cost.				
Indicates changes since the FY 2003 Presidents Budget Submit.				

<b>THEME:</b>	Space Shuttle Program (SSP)
<b>OPERATIONS:</b>	Ground Operations

## PURPOSE

Objectives	Reference 2003 Strategic Plan	Performance Measures
8.3 Improve the accessibility of space to better meet research, ISS assembly, and operations requirements.		4SSP12

Ground Operations provides final integration and checkout of all hardware elements for launch. It also includes coordination with other government agencies and foreign entities for Shuttle landing capabilities. The major launch site operational facilities at KSC include three Orbiter Processing Facilities (OPFs), two launch pads, the Vehicle Assembly Building (VAB), the Launch Control Center (LCC) and three Mobile Launcher Platforms (MLPs).

## OVERVIEW

Ground operations support includes launch countdown and landing for six Shuttle missions in FY 2004. Ground support for Shuttle landing includes both the KSC and Edwards AFB runways and multiple contingency landing sites in the U.S. and other countries. Ground Operations also includes the maintenance and operations of ground infrastructure to support launch and landing. Three or four orbiters are normally in the hardware processing flow along with External Tanks, Space Shuttle Main Engines and Solid Rocket Booster components to support several missions.

## PROGRAM MANAGEMENT

The Shuttle ground operations responsibility is delegated to KSC. The OSF Program and Institutional Management Council (OPIMC) has SSP governing responsibility. Enterprise official is William F. Readdy, Associate Administrator for Space Flight at HQ. Theme Director and Point of Contact is General Michael C. Kostelnik, Deputy Associate Administrator for ISS and SSP at HQ. The Program Manager is Ronald D. Dittmore at JSC. Full compliance with NPG 7120.5B will be achieved in FY 03.

## TECHNICAL COMMITMENT

Flights are baselined approximately 12 to 13 months prior to targeted launch date.

Technical Specifications	FY04 President's Budget	Change from Baseline
STS-117	Integrate & Deliver S3/S4 Truss	--
STS-118	Integrate & Deliver S5 Truss	--
STS-119	Integrate & Deliver S6 Truss, Rotate Crew	--
STS-120	Integrate & Deliver Node 2	--
STS-121	ULF2 -Integrate, Deliver, & Return MPLM, Rotate Crew	--

Schedule	FY04 President's Budget	Change from Baseline
STS-117/Endeavour	1st Qtr FY 04	--
STS-118/Columbia	1st Qtr FY 04	--
STS-119/Atlantis	2nd Qtr FY 04	--
STS-120/Endeavour	2nd Qtr FY 04	--
STS-121/Discovery	4th Qtr FY 04	--

**THEME:** Space Shuttle Program (SSP)

**OPERATIONS:** Ground Operations

### ACQUISITION STRATEGY & PERFORMING ORGANIZATIONS

The prime contractor for ground operations is United Space Alliance under the Space Flight Operations Contract (SFOC). This contract covers operations through Sept. 30, 2004. The SFOC contract was awarded in 1996 as a sole source contract on the determination that this acquisition strategy was in the best interest of the U. S. Government in reducing procurement costs, overall contract costs, and minimizing the disruption of on-going Shuttle operations. Changes since FY03 Pres. Budget: None.

Current Acquisitions	Actual *	Selection Method	Actual *	Performer	Actual *
Cooperative Agreement	0%	Full & Open Competition	12.4%	Industry	98.6%
Cost Reimbursable	95.8%	Sole Source	87.6%	Government	1.2%
Fixed Price	2.6%		100%	NASA Intramural	0%
Grants	0%			University	0.1%
Other	1.5%	Sci Peer Review	N/A	Non Profit	0.1%
* as % of FY02 direct procureme		100%	* as % of FY02 direct procurement		* as % of FY02 direct procureme
					100%

Future Acquisitions - Major	Selection	Goals
SFOC	Full & Open	President's Mgt. Agenda on Competitive Sourcing

### AGREEMENTS

Internal: The program is not dependent on other NASA activities outside of the control of the Associate Administrator of Space Flight.

External: Department of Defense and Foreign Countries in support of all Emergency Landing Sites.

Changes since FY03 Pres. Budget: None.

### INDEPENDENT REVIEWS

Types of Review	Performer	Last Review	Next Review	Purpose
None				

### BUDGET

Budget Authority (\$ in millions)	FY02	FY03	FY04	Comments
FY 2004 President's Budget	537.1	527.9	899.5	
Ground Operations	537.1	527.9	899.5	
Changes since FY 03 Pres. Budget	-	-	+290.5	<b>Reason for Change:</b> Full Cost in FY 04 .
Indicated budget numbers in Full Cost.				
Indicates changes since the FY 2003 Presidents Budget Submit.				



**THEME:** Space Shuttle Program (SSP)

**OPERATIONS:** Flight Operations

## PURPOSE

Objectives	Reference 2003 Strategic Plan	Performance Measures
8.3 Improve the accessibility of space to better meet research, ISS assembly, and operations requirements.		4SSP1, 4SSP2, 4SSP3, 4SSP12, 4SSP13, 4SSP14, 4SSP16

SSP Flight Operations assures the successful accomplishment of pre-flight planning, crew training, operations control activities, flight crew operations support, aircraft maintenance and operations, and life sciences operations support for each mission to efficiently and effectively meet our customer requirements in exploring the fundamental principles of physics, chemistry, and biology through research in the unique environment of space. Program Integration performs the analyses necessary to demonstrate our ability to safely and reliably conduct each Shuttle mission.

## OVERVIEW

The planning activities range from the development of operational concepts and techniques to the creation of detailed systems operational procedures and checklists. Flight operations funding also provides for the maintenance and operation of critical mission support facilities including the Mission Control Center (MCC), Integrated Training Facility (ITF), Integrated Planning System (IPS) and the Software Production Facility (SPF). The major operations facilities at Johnson Space Center (JSC) include flight design systems and the training of aircraft fleet.

For more status information go to <http://spaceflight.nasa.gov>

## PROGRAM MANAGEMENT

The Shuttle Flight operations responsibility is delegated to JSC. The OSF Program and Institutional Management Council (OPIMC) has SSP governing responsibility. Enterprise official is William F. Readdy, Associate Administrator for Space Flight at HQ. Theme Director and Point of Contact is General Michael C. Kostelnik, Deputy Associate Administrator for ISS and SSP at HQ. The Program Manager is Ronald D. Dittmore at JSC. Full compliance with NPG 7120.5B will be achieved in FY 03.

## TECHNICAL COMMITMENT

Flights are baselined approximately 12 to 13 months prior to targeted launch date.

Technical Specifications	FY04 President's Budget	Change from Baseline
STS-117	Integrate & Deliver S3/S4 Truss	--
STS-118	Integrate & Deliver S5 Truss	--
STS-119	Integrate & Deliver S6 Truss, Rotate Crew	--
STS-120	Integrate & Deliver Node 2	--
STS-121	ULF2 -Integrate, Deliver, & Return MPLM, Rotate Crew	--

Schedule	FY04 President's Budget	Change from Baseline
STS-117/Endeavour	1st Qtr FY 04	--
STS-118/Columbia	1st Qtr FY 04	--
STS-119/Atlantis	2nd Qtr FY 04	--
STS-120/Endeavour	2nd Qtr FY 04	--
STS-121/Discovery	4th Qtr FY 04	--

**THEME:** Space Shuttle Program (SSP)

**OPERATIONS:** Flight Operations

### ACQUISITION STRATEGY & PERFORMING ORGANIZATIONS

The prime contractor for flight operations is United Space Alliance under the Space Flight Operations Contract(SFOC). This contract covers 2 years of operations through September 30, 2004. The SFOC contract was awarded in 1996 as a sole source contract on the determination that this acquisition strategy was in the best interest of the U. S. Government in reducing procurement costs, overall contract costs, and minimizing the disruption of on-going Shuttle operations.

Changes since FY03 Pres. Budget: None.

Current Acquisitions	Actual *	Selection Method	Actual *	Performer	Actual *
Cooperative Agreements	0%	Full & Open Competition	12.4%	Industry	98.6%
Cost Reimbursable	95.8%	Sole Source	87.6%	Government	1.2%
Fixed Price	2.6%		100%	NASA Intramural	0%
Grants	0%			University	0.1%
Other	1.5%	Sci Peer Review	N/A	Non Profit	0.1%
* as % of FY02 direct procurement		* as % of FY02 direct procurement		* as % of FY02 direct procurement	
100%				100%	

Future Acquisitions - Major	Selection	Goals
SFOC	Full & Open	President's Management Agenda on Competitive Sourcing.

### AGREEMENTS

Internal: The program is not dependent on other NASA activities outside of the control of the Associate Administrator of Space Flight.

External: None

Changes since FY03 Pres. Budget: None.

### INDEPENDENT REVIEWS

Types of Review	Performer	Last Review	Next Review	Purpose
None				

### BUDGET

Budget Authority (\$ in millions)	FY02	FY03	FY04	Comments
FY 2004 President's Budget	238.0	264.6	375.4	
Flight Operations	238.0	264.6	375.4	
Changes since FY 03 Pres. Budget	=	=	+88.2	<b>Reason for Change:</b> Full Cost in FY 04.
Indicated budget numbers in Full Cost.				
Indicates changes since the FY 2003 Presidents Budget Submit.				

**THEME:** Space Shuttle Program (SSP)

**OPERATIONS:** Flight Hardware

## **PURPOSE**

Objectives	Reference 2003 Strategic Plan	Performance Measures
8.3 Improve the accessibility of space to better meet research, ISS assembly, and operations requirements.		4SSP13, 4SSP14

SSP Flight Hardware assures the vehicle hardware and software are designed, developed, manufactured, and tested sufficiently to enable the safe and reliable transportation that meets our customers' requirements for research in the unique environment of space. Shuttle Flight Hardware and software assures the success of each Shuttle mission.

## **OVERVIEW**

The Flight Hardware program produces space components to support Shuttle mission requirements and ensures core skills and capabilities required for maintaining the Orbiter as a safe and effective transportation and science platform. Other support requirements are also provided for in this budget, including tasks, that support flight software development and verification. The software activities include development, formulation and verification of the guidance, targeting and navigation systems software in the Orbiter.

## **PROGRAM MANAGEMENT**

The Shuttle flight hardware responsibility is delegated to JSC for Orbiter and EVA, MSFC for ET, RSRM, SRB, and SSME, and SSC for SSME test support. The OSF Program and Institutional Management Council (OPIMC) has SSP governing responsibility. Enterprise official is William F. Readdy, Associate Administrator for Space Flight at HQ. Theme Director and Point of Contact is General Michael C. Kostelnik, Deputy Associate Administrator for ISS and SSP at HQ. The Program Manager is Ronald D. Dittmore at JSC. Full compliance with NPG 7120.5B will be achieved in FY 03.

## **TECHNICAL COMMITMENT**

Flights are baselined approximately 12 to 13 months prior to targeted launch date.

Technical Specifications	FY04 President's Budget	Change from Baseline
STS-117	Integrate & Deliver S3/S4 Truss	--
STS-118	Integrate & Deliver S5 Truss	--
STS-119	Integrate & Deliver S6 Truss, Rotate Crew	--
STS-120	Integrate & Deliver Node 2	--
STS-121	ULF2 -Integrate, Deliver, & Return MPLM, Rotate Crew	--

Schedule	FY04 President's Budget	Change from Baseline
STS-117/Endeavour	1st Qtr FY 04	--
STS-118/Columbia	1st Qtr FY 04	--
STS-119/Atlantis	2nd Qtr FY 04	--
STS-120/Endeavour	2nd Qtr FY 04	--
STS-121/Discovery	4th Qtr FY 04	--

**THEME:** Space Shuttle Program (SSP)

**OPERATIONS:** Flight Hardware

### ACQUISITION STRATEGY & PERFORMING ORGANIZATIONS

The prime contractor for the external tank is Lockheed Martin Corporation. This contract expires December 1, 2008. The prime contractor for the Space Shuttle Main Engine is Boeing-Rocketdyne Propulsion & Power Systems. This contract expires December 31, 2006. The prime contractor for the Vehicle & Solid Rocket Booster is United Space Alliance. This contract ends September 30, 2004. The prime contractor for the Reusable Solid Rocket Motor is ATK Thiokol Propulsion. This contract covers 2 years of operations, renewable in FY04. The prime contractors for the Extravehicular Mobility Unit are United Space Alliance for hardware processing and Hamilton Sundstrand for development and sustaining engineering. This USA contract ends September 30, 2004. **Changes since FY03 Pres. Budget: None.**

Current Acquisitions	Actual *	Selection Method	Actual *	Performer	Actual *
Cooperative Agreements	0%	Full & Open Competition	12.4%	Industry	98.6%
Cost Reimbursable	95.8%	Sole Source	87.6%	Government	1.2%
Fixed Price	2.6%		100%	NASA Intramural	0%
Grants	0%			University	0.1%
Other	1.5%	Sci Peer Review	N/A	Non Profit	0.1%
* as % of FY02 direct procurement	100%	* as % of FY02 direct procurement		* as % of FY02 direct procurement	100%

Future Acquisitions - Major	Selection	Goals
SFOC	Full & Open	President's Mgt. Agenda on Competitive Sourcing

### AGREEMENTS

*Internal:* The program is not dependent on other NASA activities outside of the control of the Associate Administrator of Space Flight.

*External:* None

**Changes since FY03 Pres. Budget: None.**

### INDEPENDENT REVIEWS

Types of Review	Performer	Last Review	Next Review	Purpose
Audit	GAO	1-Jan-01	3-Mar-03	Orbiter Maintenance Modification decision

### BUDGET

Budget Authority (\$ in millions)	FY02	FY03	FY04	Comments
FY 2004 President's Budget	<u>1787.5</u>	1,681.7	<u>1,983.2</u>	
Flight Hardware	1787.5	1,681.7	1,983.2	
Changes since FY 03 Pres. Budget	-	-	+28.0	<b>Reason for Change:</b> Full Cost balanced by reprogramming funds to SLEP.
	Indicated budget numbers in Full Cost.			
	Indicates changes since the FY 2003 Presidents Budget Submit.			

<b>THEME:</b>	Space Shuttle Program (SSP)
<b>OPERATIONS:</b>	Shuttle Service Life Extension Program

## PURPOSE

Objectives	Reference 2003 Strategic Plan	Performance Measures
8.3 Improve the accessibility of space to better meet research, ISS assembly, and operations requirements.		4SSP15

The Space Shuttle Service Life Extension Program (SLEP) is a strategic and proactive program designed to keep the Space Shuttle flying safely and efficiently in order to meet agency commitments and goals for access to space. The Shuttle Service Life Extension Program (SLEP) addresses the ability of the Shuttle to maintain the existing safety posture of the flight and ground support/facilities systems while operating the Shuttle well into the next decade. NASA is reformulating (through the SLEP Summit Process) its approach to prioritizing, selecting and managing these investments to ensure Shuttle operability into the next decade within schedule and budget guidelines.

## OVERVIEW

Includes high priority projects for safety, supportability, and infrastructure. These projects provide revitalization of the Shuttle infrastructure and combat obsolescence of vehicle, ground systems, and facilities to maintain the program's safety and viability into the next decade. Service life extension projects include the design, manufacturing, and process changes that eliminate, reduce, or mitigate significant hazards and critical failure modes. Investments made to research and development infrastructure ensure the continued safe operations of the Shuttle ground support equipment, tooling and special test equipment required for Shuttle processing. Construction of Facilities (CoF) funding for Shuttle projects is provided to refurbish, modify, reclaim, replace and restore facilities at Office of Space Flight (OSF) Centers to improve performance, address environmental concerns of the older facilities and to ensure their readiness to support Shuttle operations.

## PROGRAM MANAGEMENT

The Shuttle Service Life Extension Program responsibility is delegated to the Space Shuttle Program Office. The OSF Program and Institutional Management Council (OPIMC) has SSP governing responsibility. Enterprise official is William F. Readdy, Associate Administrator for Space Flight at HQ. Theme Director and Point of Contact is General Michael C. Kostelnik, Deputy Associate Administrator for ISS and SSP at HQ. The Program Manager is Ronald D. Dittmore at JSC. Full compliance with NPG 7120.5B will be achieved in FY 03.

## TECHNICAL COMMITMENT

Flights are baselined approximately 12 to 13 months prior to targeted launch date.

Technical Specifications	FY04 President's Budget	Change from Baseline
TBD - Shuttle Service Life Extension Program Summit in FY 03 to determine program priorities and investment strategy.		
Schedule	FY04 President's Budget	Change from Baseline
Conduct annual SLEP Summit	Mar-04	New Baseline

<b>THEME:</b>	Space Shuttle Program (SSP)
<b>OPERATIONS:</b>	Shuttle Service Life Extension Program

### ACQUISITION STRATEGY & PERFORMING ORGANIZATIONS

The acquisition strategy for the ground facilities procurements will be full and open competition. Procurement activities for flight and ground support systems will be a combination of full and open competition where applicable hardware or software development experience is not necessary to conduct the procurement. Where applicable hardware and software development experience is deemed necessary to meet NASA's requirements, existing contracts may be augmented without competition to fulfill the overall government interests.

Changes since FY03 Pres. Budget: None.

Current Acquisitions	Actual *	Selection Method	Actual *	Performer	Actual *
Cooperative Agreements	TBD	Full & Open Competition	TBD	Industry	TBD
Cost Reimbursable	TBD	Sole Source	TBD	Government	TBD
Fixed Price	TBD		100%	NASA Intramural	TBD
Grants	TBD			University	TBD
Other	TBD	Sci Peer Review	TBD	Non Profit	TBD
* as % of FY02 direct procurement		* as % of FY02 direct procurement		* as % of FY02 direct procurement	
100%				100%	

Future Acquisitions - Major	Selection	Goals
None		

### AGREEMENTS

Internal: The program is not dependent on other NASA activities outside of the control of the Associate Administrator of Space Flight.

External: None.

Changes since FY03 Pres. Budget: None.

### INDEPENDENT REVIEWS

Types of Review	Performer	Last Review	Next Review	Purpose
Fact Finding	IG	Under Way		To evaluate NASA's planning & management of Space Shuttle Infrastructure.

### BUDGET

Budget Authority (\$ in millions)	FY02	FY03	FY04	Comments
<b>FY 2004 President's Budget</b>				
Shuttle Service Life Extension	134.3	182.5	281.4	
Infrastructure (CofF)	39.5	91.4	53.9	For FY 2003, \$56.5M is for CofF. For FY 2004, total amount is for CofF.
Future Projects	94.8	91.1	227.5	See note
Changes since FY 03 Pres. Budget	*	*	*	<b>Reason for Change:</b>
				*Consolidated funding Shuttle Service Life Extension Program, from other Shuttle funding lines.
<div>Indicated budget numbers in Full Cost.</div> <div>Indicates changes since the FY 2003 Presidents Budget Submit.</div>				
Note: Future Projects definition to be determined through the SLEP Summit Process. This is an ongoing process using a comprehensive total systems perspective to determine the highest priority program content. Future projects may include safety, supportability, infrastructure, process improvement, personnel, etc.				